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Title:	Managing your PC assets.
Subject(s):	SYSTEMS Management Server (Computer software); FRYE Utilities for Networks (Computer software); LAN Management System for Netware 5.00 (Computer software) NORTON Administrator for Networks 2.0 (Computer software) BRIGHTWORKS 2.0 (Computer software)
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Abstract:	Evaluates five software products that help manage personal computers and Macintosh computers. Microsoft's Systems Management Server (SMS); Frye Utilities for Networks; Saber Soft's LAN Management System for Netware version 5.00; Symantec's Norton Administrator for Networks version 2.0 beta; McAfee Associate's BrightWorks version 2.0.
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MANAGING YOUR PC ASSETS

Considering that any given corporate network could include hundreds of PCs, is it any wonder that many network administrators don't know what hardware and software is installed on each PC? Luckily, there is a way to find out. Just let the computers do what they do best: keep track of things.

This week, InformationWeek's OpenLabs examines five products that help manage PCs and Macs: Microsoft's Systems Management Settler (SMS) version 1.0; Frye Computer Systems' Frye Utilities for Networks (various versions); Saber Software's LAN Management System for NetWare version 5.00; Symantec's Norton Administrator for Networks version 2.0 beta; and McAfee Associates' BrightWorks version 2.0.

Operating over standard network protocols, these multifunction products not only build and maintain inventories of hardware and software assets, but they also distribute and meter software packages and help troubleshoot the network. In short, these products solve many or the problems most network administrators wrestle with daily.

Inventory packages are worth their weight in gold to harried systems managers. They can help administrators negotiate with vendors by providing rundowns of past purchases and calculating the cost of across-the-board hardware or software upgrades. They can check available memory and interrupt addresses of workstations remotely. They can even trace the disappearance from the network of previously inventoried equipment, which could indicate a theft.

Most inventory packages run a collection agent on each workstation at boot-up, either from a login script or the Windows startup group. Installed applications are recognized using a database that stores known characteristics of popular applications. Many packages collect copies of standard configuration files such as AUTOEXEC.BAT and CONFIG.SYS from each workstation for easy perusal.

Network management programs handle servers, workstations, and their files. Some packages let administrators transfer files to and from a workstation, run programs on the workstation, reboot, or take over the workstation-all from a remote network console.

Software metering ensures that users don't exceed the company's number or software licenses when they run copies of programs. Some packages generate reports that prove to the Software Publishers Association that a company has sufficient licenses, important in these days of surprise software auditS.

Software distribution packages automate the installation and updating of both commercial and internally developed software, as well as data, text, and standard system files such as AUTOEXEC.BAT, CONFIG.SYS, and .INI files. The programs reviewed here let administrators select workstations on

which software will be installed, based on such criteria as memory size, version of DOS or Windows installed, and free disk space.

Microsoft SMS

Microsoft's SMS may be the most ambitious product for managing PCs on corporate networks. Requiring a well-stuffed Windows NT machine preloaded with Microsoft's SQL Server database management system, SMS provides inventory, remote management, software distribution, and network monitoring functions in a package designed to handle the largest corporate networks. One feature SMS does not provide is software license metering.

SMS complies with the Management Information Format (MIF) standard of the Desktop Management Task Force.

SMS's distributed client-server technology means an SMS site can run alone or connected to secondary servers at remote sites over LANs or WANs. For large networks, more SMS servers can be added.

SMS requires Windows NT and a copy of SQL Server 4.21 or higher. Microsoft recommends 500 Mbytes of free disk space for a working system. OpenLabs' Windows NT machine was a 486/66--the bare minimum for a primary-site server running SMS. Optimally, an administrator would run a second machine dedicated to SQL Server. Microsoft also recommends 28 Mbytes of RAM; OpenLabs' machine had 32 Mbytes and I still observed slowdowns due to paging.

SMS requires a great deal of planning and understanding, from network topology to system tuning. Attending Microsoft's week-long training course should be a requirement for anyone considering SMS.

SMS's remote-control features, including an online *chat* mode, must be enabled by users themselves so they can control security. An annoying feature for users is that if the SMS server goes down, the remote-control program keeps popping up on the workstation, complaining that it can no longer communicate with the server.

The most powerful diagnostic tool in SMS is the Microsoft Network Monitor, which captures network packets of any kind-even from remote nodes--and graphically selects, filters, and displays them. Administrators can even re-transmit captured packets back to the network for diagnosis of problems. A TCP/IP-like ping facility also is included for testing network connections.

SMS graphically displays a site's domain tree structure, making it easy to find a particular computer. If administrators don't know exactly where a computer fits in the topology, they can easily find it through a query created by clicking buttons in a *dialog* box. Administrators can create ad hoc queries and save often-used queries to files for later·execution.

A great deal of information is stored for each workstation. This information can be displayed either in report form (if the administrator ran a query that found many matching workstations), or in a window with icons representing machine resources on the left side and the corresponding details on the right.

Unfortunately, SMS was unable to detect an extra 8 Mbytes of RAM above the 16-Mbyte threshold on a Dell EISA-bus test machine.

SMS has a powerful and complex distribution scheme. Each package to be installed is defined, then scheduled as a job to be run on selected workstations or servers. *Dialog* boxes lead administrators through most steps, such as selecting a time to run the job and the program group to add the new software to. SMS does the rest, including compressing the files and distributing them across the LAN or WAN at intervals, to avoid saturating the network. Once the administrator defines the packages, simply dropping a package icon on the target machine's icon will initiate the job.

SMS doesn't directly support license-tracking or metering, but administrators can trigger alerts based on a query that returns the number of copies of a program installed. This method doesn't work properly for server-based software, however.

Frye Utilities For Networks

Frye Computer Systems in Boston has long been popular with NetWare administrators, even though

Frye's products run on MS-DOS. With a look and feel similar to Novell's utilities, Frye's products give NetWare administrators high-speed response and a familiar face.

Frye Utilities for Networks is a set of integratable programs: NetWare Management V2.00C, which displays server and network statistics; NetWare Early Warning System V1.51E, which notifies administrators of problems based on configurable parameters; NetWare Console Commander V1.00D, which runs unattended scripts at the NetWare console; Statistics Display Rack V1.00B, which graphically displays real-time network statistics on Windows; Node Tracker V2.00A, which displays statistics on network traffic; Software Metering and Resource Tracking V1.50A, which meters and audits software use; Software Update and Distribution System V1.50C, which remotely installs software; LAN Directory V1.50E, which performs software and hardware inventory; and Suds Wand, which distributes software across a WAN and which was not reviewed. The packages are available a la carte; administrators only need to buy just those components that they require.

Installing Frye Utilities for Networks wasn't fun. Each component has its own box, shrink-wrap, license agreement, cardboard, and diskette, and each must be installed separately. The installed programs are launched from a top-level menu; unlicensed utilities appear as demo screens if those items are selected.

Some programs work together, so the Early Warning System can launch a NetWare Console Commander script to fix any problems it detects, then page the administrator.

NetWare Management logically organizes hundreds of statistics on screen. It constantly updates a display of server status, with virtually instantaneous response as the administrator navigates the various screens. Administrators can view and edit system configuration files, view and set server parameters, and synchronize time on file servers. Excellent reporting facilities are a hallmark of all the Frye utilities.

Node Tracker displays detailed IPX, SPX, bridge, and shell driver statistics. I was unable to use the built-in software for testing connections. Frye tech support sent a new copy, but it didn't solve the problem.

Statistics Display Rack, Frye's only Windows-based program, is an elegant utility that graphically monitors more than 200 network or server statistics. Administrators can lay out up to 25 graphic cells in a rack, with each cell containing a real-time display as a graph, bar chart, or gauge. Everything is customizable, including thresholds for warning and critical levels. Statistics Display Rack is billed as the first in a line of new Windows-based programs that will work together; unfortunately, it doesn't work now with the other utilities.

NetWare Console Commander lets administrators schedule console jobs that load and unload NetWare NLMs, run backups, and dear connections in a simple, easy-to-learn scripting language. Still, there's no provision for compiling or testing syntax, limiting administrators to testing a script only by running it.

NetWare Early Warning System (News) monitors several dozen items that can go wrong, including low server memory, lost packets, missing or modified files, full print queues, or missing workstations. It notifies the administrator of a problem through an online message, MHS Mail message, numeric pager, or by launching a specified program. Log files can be saved in ASCII or dbase format for later analysis. News can be integrated with the other major Frye modules for problem notification in other areas.

Frye's inventory module, LAN Directory, proved capable of tracking inventory history and working with standalone workstations, as well as tracking non-computer equipment. It worked over both NetWare and LAN Manager networks, though it ran noticeably slower over LAN Manager. While administrators can look readily at individual records with LAN Directory or run the more than two dozen provided reports, performing high-level ad hoc queries online is difficult. Administrators are best off modifying one of the sample reports, since the report writer syntax is arcane.

The Software Update and Distribution System performs search-and-replace in text files, finds duplicate files on a workstation, and works over WANs with an optional module. It supports uninstalling of packages installed in error, external compression programs to reduce network traffic, and scheduling file distribution for off hours (a small TSR must be running on the workstation).

A bundled copy of WinBatch+ from Wilson WindowWare in Seattle can capture a software installation session, then replay it later to install the software on other workstations. Frye's Software Metering and Resource Tracking, which uses agent software on the workstation, can meter applications on

workstation hard disks, as well as on the server.

LAN Management System

LAN Management System from Saber Software in Dallas is a mature set of programs that work together from a common window. Saber bundles its flagship LAN Workstation management product with three other Windows-based products: Saber Enterprise Application Manager, Saber Server Manager, and ReachOut Remote Control software from Ocean Isle Software in Veto Beach, Fla. Saber also includes a developer's kit and Macintosh software, and supports multiple network protocols.

Saber installs its own version of certain key NLMs (such as the Clib C library functions) on the NetWare server, overwriting a previous version even if it's more recent. This interfered with programs from other vendors that depended on newer versions of CLIB.NLM, and is not recommended for an installation procedure.

Saber also combines some user-friendly features-such as wizards that lead the administrator through creation of a software distribution-with too much complexity and reliance on command arguments in DOS and .INI settings in Windows. I would prefer defaulting to proper operation without requiring work on the administrator's part.

For network management, the administrator can be notified of server events. *Dialog* boxes for configuring notification through E-mail, online messages, and pagers make set-up easy. This program also permits scheduling of jobs, which can be any DOS or Windows program, or console or broadcast messages.

Saber Server Manager lets administrators configure parameters for any NetWare server on the network and change settings automatically at specified times. There's a real-time graphing capability for five major parameters, including server and volume utilization, network and disk activity, and number of connections. Administrators also can store and create reports on data for a three-month period.

ReachOut lets administrators control a DOS or Windows PC from the network console, and perform file transfers in either direction.

Saber's inventory tracks standalone PCs and applications stored on local hard drives. Predefined fields let administrators manually add information such as serial number, purchase date, price, and warranty. The software inventory program automatically prompts for license information and number of users at the time of the application scan on the server, which saves metering time.

Saber has exhaustive scripting capabilities. A ScriptBuilder wizard walks administrators through typical scenarios, like file and directory copy and delete, then generates the script in the SaberBasic language for later execution.

Saber Enterprise Application Manager (Seam) tracks license use by groups of users, for internal charging of resource use. It generates detailed status, inventory, and in/out reports, as well as 3-D charts. Seam also handles license sharing, lending, and waiting for available licenses, although it requires two agent programs to meter locally stored Windows applications.

NAN Suite

The Norton Administrator for Networks (NAN) suite from Symantec in Santa Monica, Calif., extends the renowned Norton ease-of-use to network administration. The new version includes WAN support for distributed sites and servers, and integration with HP's OpenView network management package. All NAN functions are available from a single, extremely intuitive console window. Unlike most beta software, the 2.0 beta I reviewed didn't crash.

NAN doesn't include network management tools per se, but administrators can integrate Norton pc Anywhere (a remote control package), AntiVirus for NetWare, Utilities Administrator, and DiskLock Administrator packages into the NAN console.

A nice feature allows an administrator to walk up to a non-networked PC with a diskette, run the inventory agent, collect the data on the diskette, and later merge the information into the master database. Information about each system is displayed on a single line in an inventory window. Clicking on the top of a column sorts by that column; clicking a query button produces a simple point-and-click

dialog box for ad hoc queries; and double clicking on a line displays detailed information on that workstation.

Just a few mouse clicks were necessary to generate a count and report of workstations sorted by CPU type. A click or two on a different menu brings up 2-D or 3-D bar or pie charts. A nice touch is that the legends for the charts were generated automatically.

NAN thought the OpenLabs' no-name clone was made by AST Research, and wasn't able to detect that 32-bit file and disk access was enabled on the EISA-based workstation. It also didn't detect the extra 8 Mbytes of RAM above the 16-Mbyte threshold.

NAN combines software distribution, text and .INI file editing, and file management in a single menu for creating jobs to be run by workstations or servers. Especially nice is that an administrator can specify that a job make backups and undo the work if the job fails.

This product distinguishes between concurrent and site licenses, and lets administrators monitor usage and change license numbers from the same screen. But there's no notification when permissive licensing goes over set limits, though the event is duly logged. Many detailed options meter, log, and report application usage.

BrightWorks

BrightWorks 2.0 from McAfee Associates in Santa Clara, Calif., which is known for its antivirus shareware, is a powerful, extensible suite of network management tools for NetWare networks. Optional features include virus protection for workstations and NLM-based anti-virus code for servers, as well as remote control, workstation management, and advanced help desk software-all available as shareware.

McAfee's shareware licensing and fee schedule are unique. The fee schedule includes unlimited support and upgrades for two years, after which the software license expires.

To keep the product, administrators must relicense it, or they could have the foresight to buy a "perpetual" license in the first place, which costs 50% more than the announced pricing, plus another 20% annually for maintenance.

Installation went smoothly, except that the LAN Support Center help-desk program and NetTune server manager had to be installed separately and weren't integrated into the main BrightWorks console.

McAfee's LANInventory module ran without an inventory TSR, but a database TSR is required on the workstation and a database NLM is required on the server. While the inventory process ran quickly on the workstation, it wasn't accurate, missing all 32 Mbytes of extended memory and mistaking the OpenLabs' 66-MHz 486 for a 60-MHz version.

An event recorder facilitates using the software distribution scripting language. It captures virtually any Windows activity to a script file, which can be debugged online and used as a template to be run on target machines for installation or other purposes.

Finally, NetTune monitors more than 100 parameters on NetWare servers and can change their configuration at particular times--often done for faster backup. NetTune also monitors server performance and dynamically tunes servers, based on selected criteria-for example, to optimize for read or write performance or for database activities.

PHOTO (COLOR): Five packages reviewed this week distribute software, manage networks, and track inventory.

PHOTO (COLOR): Norton know-how: Administrators fill in forms to define and schedule software distribution jobs for execution on a selected set of machines.

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            Clients And Protocols Supported

Legend for Chart

A - Microsoft SMS 1.0
B - Frye Utilities For Networks (various versions)
C - Saber LAN Management Systems For NetWare 5.00
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D - Symantec Norton Administrator For Networks 2.0 beta
E - McAfee BrightWorks 2.0

	A	B	C	D	E
Workstations Supported					
DOS	*	*	*	*	*
Windows	*	*	*	*	*
OS/2	*	*	--	*	--
Macintosh	*	Optional	*	*	--
Networks Supported					
NetWare 2.x	--	*	*	*	--
NetWare 3.x, 4.x	*	*	*	*	*
NDS support	--	--	*	*	*
LAN Manager	*	*	*	*	--
LAN Server	*	*	*	*	--
Vines	--	*	*	*	--
Pathworks	*	*	*	*	--
LANtastic	--	--	*	*	--
WAN support	*	*	*	*	*

DATA: VENDORS AND INFORMATIONWEEK RESEARCH

Contacts And Pricing

Legend for Chart:

A - Microsoft SMS 1.0
B - Frye Utilities For Networks (various versions)
C - Saber LAN Management System For NetWare 5.00
D - Symantec Norton Administrator For Networks 2.0 beta
E - McAfee BrightWorks 2.0

A D E	B D
Microsoft Redmond, Wash. 800-227-4679	Frye Computer Systems Boston 800-234-3793
Saber Software Dallas 800-338-8754	Symantec Santa Monica, Calif. 800-441-7234
McAffe Associates Santa Clara, Calif. 408-988-3832	
SMS Server: $649 SMS Client: $54.95 ($39.95 for 20 or more) SQL Server $999 SQL Server Client: $119	NetWare Early Warning System: $495 Console Commander: $395 Smart: $495 to $3,795 NSM: $495 Statistics Display Rack: $295 LAN Directory: $495 (first 50 PCs) SUDS: $995 (first 50 PCs) Node Tracker: $249 (first 50 PCs) SUDS Wand: $1,495
S44/node (250-499 users) $41/node (500-999 users) $38/node (1,000-2,499 users) Individual components also available	Norton Administrator: $65/node (5 users); $44/node (1,000 users) Norton pcAnywhere: $199 Norton AntiVirus: $599 (10 users) Norton Utilities Administrator:

Cogdell, Nikky

Examiner:David Bayless
Au 2713
Ph 308 6070
Case: future MPEG 4 cases

Class 375
Date of request 1/4/2000
Date needed:?

This is a request for the EIC to acquire a copy of the MPEG 4 standard to be retained as a library reference copy to support future cases

Author/editor: ISO/IEC International Standards ORG.
MPEG 4(released 98?): issued in various parts: 1. Systems 2 .video 3 .audio 4. compliance testing

Attached file has contact info

mpeg_contact.htm

1

$350 (10 users)

Brightworks: $4,000
(51-100 nodes); $26,800 (801-1,000)
NetShield: $1,540 (51-100 nodes);
$10,400 (801-1,000) NetRemote: $3,800
(51-100 nodes); $20,500 (801-1,000)

DATA: VENDOR REPORTS

Desktop Management Functions

Legend for Chart:

A - Microsoft SMS 1.0
B - Frye Utilities For Networks
C - Saber LAN Management System For NetWare 5.00
D - Symantec Norton Administrator For Networks 2.0 beta
E - McAfee BrightWorks 2.0

A	B	C	D	E	F
Inventory					
Hardware detection (No. of items)	All DMI devices	700	50	260	50
Software detection (No. of apps)	2,500	Almost 8,000	1,000	1,500	2,600
SPA-approved reporting	--	*	*	*	*
Server hardware inventory	*	*	--	--	*
Server software inventory	*	*	*	--	*
Software Distribution					
Full softwared install	*	*	*	*	*
Remote batch editing of INI files	*	*	*	*	*
File update & replacement	*	*	*	*	*
Scripting language	*	*	*	*	*
Configurable standard file sets	*	*	*	*	*
Task recording/ replay	--	--	*	*	*
Uninstall	--	*	--	*	--
WAN support	*	Optional	*	*	--
Software License Monitoring/ Metering					
Site licensing	*	*	*	*	*
License waiting list	--	*	*	*	*
Suite licensing	*	*	*	*	*
Inter-server migration	*[a]	--	*	*	*
Configurable notification for network administration	*[a]	*	*	*	--
Time-based					

	A	B	C	D	E
restrictions	*[a]	--	--	*	*
Workstation agent software	*	Optional	*	*	--
WAN support	*	--	*	*	*

[a] Only if application runs from server

DATA: VENDORS AND INFORMATIONWEEK RESEARCH

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             Network Management Functions
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Legend for Chart:

A - Microsoft SMS 1.0
B - Frye Utilities For Networks (various versions)
C - Saber LAN Management System For NetWare 5.00
D - Sysmantec Norton Administrator For Networks 2.0 beta
E - McAfee BrightWorks 2.0

	A	B	C	D	E
Network Management	*	*	*	--	--
Replicate user info across servers	*	*	--	*	*
SNMP support	*	--	Macintosh only	--	--
otify administrator via configurable alarms	*	*	*	*	*
Test nodes on network	*	*	--	*	--
Job scheduling	*	*	*	*	--
Virus scan	--	*	--	Optional	Optional
Help-desk support	--	--	Optional	--	*
Network packet analyzer tools	*	*	--	--	--
Remote Control				Optional	Optional
Workstations supported	DOS, Windows	--	DOS, Windows	DOS, Windows	DOS, Windows
Highest video mode	640 x 480 (DOS); SMS console (Windows)	--	1,024 x 768	800 x 600	1,208 x 1,024
Remote reboot	*	--	--	*	*
File transfer	*	--	*	*	*
Dial-up support	*	--	--	*	*
Protocols supported	IPX, X.25, ISDN, IP NetBEUI	--	IPX, NetBEUI, FTP,IP	IPX, NetBEUI, IP	IPX, NetBIOS
WAN support	*	--	--	*	*
Server Management				Optional	
Manage multiple servers from central site	*	*	*	*	*
Job scheduling	*	*	--	*	--
Manage NetWare NLMS	--	*	--	*	--

DATA: VENDORS AND INFORMATIONWEEK RESEARCH

Microsoft's Systems Management Server 1.0

° Provides inventory, remote control, software distribution, and network monitoring; functions in a powerful and well-integrated system

° Training class and plenty of planning necessary

Strengths

° Handles larger networks including WANs

° Useful network diagnostic tool captures and graphically displays communications packets

Weaknesses

° Very large system with steep learning curve

° No software license metering

Frye Computer Systems' Frye Utilities for Networks

° Comprehensive set of easy-to-use programs that perform inventory, software distribution, license metering, and network management

° Good for small networks

Strengths

° Available e la carte, so administrators can buy only the components they need

° Fast response time

° Low system-resource requirements

° Excellent reporting facilities

Weaknesses

° Not optimal for ad hoc query reports

° Most utilities run only on DOS

Saber Softwre's LAN Management System

° Full-featured, mature set of programs for inventory, software distribution, metering, remote control, and network management over multiple network protocols

Strengths

° Good vendor support, training, and history

° Exhaustive scripting capabilities

Weaknesses

° Less intuitive to use than other reviewed packages

Symantec's Norton Administrator For Networks 2.0 beta

° Excellent general package for inventory, software distribution, metering, and network management

° Version 2.0 supports WANs

Strengths

° Easy to set up and use

° Works with many network protocols

° Integrated with HP's OpenView

° Unsuccessful distribution jobs can be backed out

Weaknesses

° No significant weaknesses

McAfee's BrightWorks 2.0

° Economical, powerful, and extensible suite of NetWare tools for inventory, software distribution, metering, help desk, and network management

° Check license terms and pricing carefully

Strengths

° No risk: try before you buy

° Little impact on workstation performance

Weaknesses

° Limited to NetWare networks

° Inventory facility and suite integration have rough edges

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By David Fiedler

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